



**Table 1. CDR Sequences of CLL Specific Rabbit scFv Antibodies**

ADENMARK OFFICE

CLONE

LC-CDR1

LC-CDR2

LC-CDR3

TLSTGYSVGSVIA (SEQ ID NO: 1) HSEAKHQS (SEQ ID NO: 18) ATAHGSSSFHV (SEQ ID NO: 25)  
 QASEIRN---YLA (SEQ ID NO: 2) GASNL---ES (SEQ ID NO: 19) QSGDYSA---GLT (SEQ ID NO: 26)  
 QASEIRN---YLA (SEQ ID NO: 2) GASNL---ES (SEQ ID NO: 19) QSGDYSA---GLT (SEQ ID NO: 27)  
 QASEISN---WLA (SEQ ID NO: 3) RASTL---AS (SEQ ID NO: 20) QSGYSA---GVT (SEQ ID NO: 28)  
 QASEISN---YLA (SEQ ID NO: 4) GASNL---ES (SEQ ID NO: 19) QSGYSA---GLT (SEQ ID NO: 27)  
 QASQNIYS---NLA (SEQ ID NO: 5) LAFTL---AS (SEQ ID NO: 21) QSGDYSSSSYGYG (SEQ ID NO: 29)  
 QASQSVNN---LLA (SEQ ID NO: 6) GASNL---ES (SEQ ID NO: 19) QSGYSP---GVT (SEQ ID NO: 30)  
 QASESINN---YLA (SEQ ID NO: 7) GASNL---ES (SEQ ID NO: 19) QSGYSG---GAT (SEQ ID NO: 31)  
 LASENVYS---AVA (SEQ ID NO: 8) GASDL---ES (SEQ ID NO: 22) Q-GYSSYP-T (SEQ ID NO: 32)  
 LASENVYG---AVA (SEQ ID NO: 9) GASNL---ES (SEQ ID NO: 19) Q-GYSSYP-T (SEQ ID NO: 33)  
 QASQSVNN---LLA (SEQ ID NO: 10) GASNL---ES (SEQ ID NO: 19) AGYKSSSTD-GIA (SEQ ID NO: 34)  
 QASQTSN---LLA (SEQ ID NO: 11) GASNL---ES (SEQ ID NO: 19) QSGYSA---GHLT (SEQ ID NO: 35)  
 LASENVAS---TVS (SEQ ID NO: 12) HTDDIKHQS (SEQ ID NO: 23) LGFGYSTT-GLT (SEQ ID NO: 36)  
 TLSTGYSVGEPLV (SEQ ID NO: 13) HTDDIKHQS (SEQ ID NO: 23) ATAHGSSSFHV (SEQ ID NO: 37)  
 LASENVYS---GLS (SEQ ID NO: 14) GASNL---ES (SEQ ID NO: 19) AIAHGTSSSFHV (SEQ ID NO: 38)  
 QASQSVN---LLA (SEQ ID NO: 15) GASNL---ES (SEQ ID NO: 19) QSGYRA---GALT (SEQ ID NO: 40)  
 QASQSVNN---LLA (SEQ ID NO: 16) RASTL---AS (SEQ ID NO: 20) QSGYSA---GLT (SEQ ID NO: 27)  
 QASQSVN---LLA (SEQ ID NO: 17) GASNL---ES (SEQ ID NO: 19) QSGYSA---GLT (SEQ ID NO: 27)  
 QASQSVN---LLA (SEQ ID NO: 18) GASNL---ES (SEQ ID NO: 19) QSGYSA---GALT (SEQ ID NO: 42)  
 QASQSVN---LLA (SEQ ID NO: 19) GASNL---ES (SEQ ID NO: 19) QSGYSA---GLT (SEQ ID NO: 27)  
 QASQSVN---LLA (SEQ ID NO: 20) GASNL---ES (SEQ ID NO: 19) QSGYSA---GALT (SEQ ID NO: 43)  
 QASQSVN---LLA (SEQ ID NO: 21) GASNL---ES (SEQ ID NO: 19) QSNASV---GMT (SEQ ID NO: 44)  
 QASQSVN---LLA (SEQ ID NO: 22) GASNL---ES (SEQ ID NO: 19) AAQYSGN---IYT (SEQ ID NO: 45)  
 QASQSVN---LLA (SEQ ID NO: 23) GASNL---ES (SEQ ID NO: 19) Q-GYSSYP-T (SEQ ID NO: 33)  
 QASQSVN---LLA (SEQ ID NO: 24) GASNL---ES (SEQ ID NO: 19) Q-GYSSYP-T (SEQ ID NO: 33)

CLONE

HC-CDR1

HC-CDR2

HC-CDR3

NYAMT (SEQ ID NO: 45) IISNNGGA---DYASWAK (SEQ ID NO: 64) DDEGYDDYDMGYFTL (SEQ ID NO: 84)  
 SYGLS (SEQ ID NO: 46) YFDPVFGNI---YATWVD (SEQ ID NO: 65) DRIYVSSVG---YAFNL (SEQ ID NO: 85)  
 TYGVS (SEQ ID NO: 47) YNDPIFGNT---YATWVN (SEQ ID NO: 66) DRYVSSSG---YXXX (SEQ ID NO: 86)  
 SNAMG (SEQ ID NO: 48) IISNNGGT---YASWAK (SEQ ID NO: 67) DWIAAGKS---YGLDL (SEQ ID NO: 87)  
 TNAMG (SEQ ID NO: 49) IISNNGST---YASWAK (SEQ ID NO: 68) DWIAAGKS---YGLDL (SEQ ID NO: 88)  
 SSDWIC (SEQ ID NO: 50) CIYTGSSSTYASWAK (SEQ ID NO: 69) RYTGNG---NL (SEQ ID NO: 89)  
 SDVIS (SEQ ID NO: 51) YIYTGDSGT---DYASWN (SEQ ID NO: 70) DAAVAGYGW---IFNL (SEQ ID NO: 89)  
 SDVIS (SEQ ID NO: 52) YIYTGDSGT---DYASWN (SEQ ID NO: 71) DAAVAGYGW---IFNL (SEQ ID NO: 89)  
 TYAMG (SEQ ID NO: 53) SIYASRSP---YASWAK (SEQ ID NO: 71) GDAGSIP---YFKL (SEQ ID NO: 90)  
 SNAMT (SEQ ID NO: 54) SIYASRSP---YASWAK (SEQ ID NO: 72) GDAGSIP---YFKL (SEQ ID NO: 90)  
 DFAMS (SEQ ID NO: 55) VVYAGTRGDTYANWAK (SEQ ID NO: 73) GNV---FSDL (SEQ ID NO: 91)  
 DFAMS (SEQ ID NO: 56) VVYAGTRGDTYANWAK (SEQ ID NO: 74) GLT---YFPL (SEQ ID NO: 92)  
 SYGMN (SEQ ID NO: 57) YIDPDYGST---YASWVN (SEQ ID NO: 75) GLT---YFPL (SEQ ID NO: 92)  
 SYGMN (SEQ ID NO: 58) YIDPDYGST---YASWVN (SEQ ID NO: 76) GAYSGYPS---YFNL (SEQ ID NO: 93)  
 SYGMN (SEQ ID NO: 59) ITPYSGNV---YASWAK (SEQ ID NO: 77) GAYSGYPS---YFNL (SEQ ID NO: 93)  
 SNAMS (SEQ ID NO: 60) ITPYSGNV---YASWAK (SEQ ID NO: 78) G---FFNL (SEQ ID NO: 94)  
 TNAIS (SEQ ID NO: 61) YSSYGNN---HYTNWAK (SEQ ID NO: 79) GNA---YFNL (SEQ ID NO: 95)  
 SNAMS (SEQ ID NO: 62) IISNNGGT---YANWAK (SEQ ID NO: 80) DQPIIYAGYDGLATGRLDL (SEQ ID NO: 96)  
 SYMS (SEQ ID NO: 63) IISNNGST---YATWAK (SEQ ID NO: 81) DQPIIDAAVAGYDGLATGRLDL (SEQ ID NO: 97)  
 SYMS (SEQ ID NO: 64) IISNNGSA---YATWAK (SEQ ID NO: 82) DQPIITDYGAGYATGRLDL (SEQ ID NO: 98)  
 SNALS (SEQ ID NO: 65) IIVGSGTT---YADWAK (SEQ ID NO: 83) DQPIIVAGYGY---ATGRLDL (SEQ ID NO: 99)  
 SNALS (SEQ ID NO: 66) IIVGSGTT---YADWAK (SEQ ID NO: 84) DQPIIVAGYGY---ATGRLDL (SEQ ID NO: 99)  
 TNAIS (SEQ ID NO: 67) TITVGTNA---YASWAK (SEQ ID NO: 85) GNT---YFNL (SEQ ID NO: 100)  
 TNAIS (SEQ ID NO: 68) TITVGTNA---YASWAK (SEQ ID NO: 86) GNT---YFNL (SEQ ID NO: 100)  
 SNAMS (SEQ ID NO: 69) CIYTGSSSTYASWAK (SEQ ID NO: 87) AVIYVGGY---FFDL (SEQ ID NO: 101)  
 SSYVIC (SEQ ID NO: 70) YIDPVFGST---YASWVN (SEQ ID NO: 88) EASFY---GMDL (SEQ ID NO: 102)  
 NYGVN (SEQ ID NO: 71) YIDPVFGST---YASWVN (SEQ ID NO: 89)

CLONE: designation of representative clone for sequence; LC: Ig light chain; HC: Ig heavy chain; CDR: complementarity determining region

FIGURE 9C

Table 1(cont'd). Expression Pattern of CLL Specific Rabbit scFv Antibodies

Expression Pattern:

CLONE	CLL	B	RL	Ramos	TF-1	Ag	Linker
A2c	+	+	++	+	-		S
G12.1c	+	+	+	+	-	CD19	L
B4.2a	+	nd	+	+	-		L
E1c	++	+	-	-	-	CD23	S
F2d	++	+	-	-	-		S
E5e	±	nd	-	-	-		S
H6.2b	++	++	-	-	-		S
G10.1	+	+	-	-	-		S
D11.1c	++	+	-	-	-	CD23	S
A5.2c	++	+	-	-	-		S
F1d	+	±	-	-	-		S
F1e	++	nd	-	-	-		S
E4.2	+	+	-	-	-		S
E2c	+	±	-	-	-		S
A9c	++	+	-	-	-		S
E11e	++	+	-	-	-		S
A1.1	+	+	nd	nd	nd		L
F5.2	+	nd	+	+	-		L
F10b	nd	nd	nd	nd	nd		L
F7a	nd	nd	nd	nd	nd		L
F6b	nd	nd	nd	nd	nd		L
C12b	nd	nd	nd	nd	nd		L
D2.1b	nd	nd	nd	nd	nd		S
D1.1	+	+	nd	nd	nd		L
D2.2a	nd	nd	nd	nd	nd		L
D2.2b	nd	nd	nd	nd	nd		S

CLONE: designation of representative clone for sequence

Expression pattern: binding of scFv antibodies to primary human cells and cell lines as determined by whole cell ELISA assay

CLL: chronic lymphocytic leukemias (primary tumors and CLL-AAT cell line)

B: normal, primary human B lymphocytes

RL: non-Hodgkin's lymphoma cell line

Ramos: Burkitt's lymphoma cell line

TF-1: human erythroleukemia cell line

Ag: antigen recognized by scFv antibody (determined by immunoprecipitation and mass spectrometry)

Linker: type of linker sequence between VL and VH regions. S, short linker; L, long linker